



Docket: 02 MAR 03 001

Client Reference 702.164

Clean Version of Pending Claims

In Re: Application of Matthew C. Burch, et al.

Serial No. 10/068,992

PDA with Integrated Navigation and Expense Reporting

-
1. A method of using a Personal Digital Assistant (PDA) to provide travel expenses for an expense report, comprising:
- monitoring travel of the PDA travel and recording track log data points that represent the PDA travel; and
 - associating a travel distance from the recorded track log with a PDA expense report entry.
2. The method of claim 1, wherein monitoring the travel of the PDA includes:
- identifying a starting location;
 - identifying an ending location; and
 - wherein associating the travel distance includes determining the travel distance based on the starting location, the ending location, and the recorded track log.
3. The method of claim 2, further comprising:
- wirelessly transmitting the starting location and the ending location from the PDA to an external electronic device such that the external electronic device is capable of calculating the route and determining the travel distance based on the starting location, the ending location, and the recorded track log; and
 - wirelessly transmitting the travel distance from the external device to the PDA.
4. The method of claim 2, wherein at least one of identifying a starting location and identifying an ending location includes using a waypoint to identify the location.
5. The method of claim 2, wherein at least one of identifying a starting location and identifying an ending location includes using an address to identify the location.

6. The method of claim 2, wherein at least one of identifying a starting location and identifying an ending location includes using a map feature to identify a location.
7. The method of claim 2, wherein at least one of identifying a starting location and identifying an ending location includes manually entering coordinates.
8. The method of claim 2, wherein at least one of identifying a starting location and identifying an ending location includes manually selecting a location on an electronic map.
9. The method of claim 1, wherein associating a travel distance includes:
identifying a first endpoint on a newly recorded track log;
identifying a second endpoint on the newly recorded track; and
determining the travel distance along the newly recorded track log between the first endpoint and the second endpoint.
10. The method of claim 9, further comprising forming the newly recorded track log by monitoring PDA travel.
11. The method of claim 10, wherein forming the newly recorded travel log by monitoring PDA travel includes:
identifying PDA positions using global positioning system (GPS) technology over a period of time; and
recording a set of track log points for the newly recorded track log by using at least some of the identified PDA positions.
12. The method of claim 10, further comprising storing the newly recorded track log in a memory located in the PDA.
13. The method of claim 10, further comprising storing the newly recorded track log in memory of an electronic device that is external to the PDA.

14. The method of claim 13, further comprising wirelessly transmitting the first endpoint, the second endpoint, and the newly recorded track log to the electronic device such that the external device is capable of determining the travel distance along the newly recorded track log between the first endpoint and the second endpoint.

15. A method of using a Personal Digital Assistant (PDA) to provide travel expenses for an expense report, comprising:

identifying a starting location of the PDA;

monitoring travel of the PDA from the starting location;

recording a number of track log data points that represent actual positions of the PDA from the monitored travel of the PDA; and

associating a travel distance with a PDA expense report entry, the travel distance taken from the number of track log data points that represent actual positions of the PDA from the monitored travel of the PDA.

16. The method of claim 15, wherein:

identifying a starting location includes resetting a counter; and

monitoring travel from the starting location includes incrementing the counter.

17. The method of claim 15, wherein monitoring travel from the starting location includes monitoring a position of the PDA using global positioning system (GPS) technology.

18. The method of claim 15, wherein monitoring travel from the starting location includes receiving a signal from a vehicle odometer that indicates the distance traveled.

19. The method of claim 15, further comprising:

transmitting the travel distance associated with the PDA expense report entry to an electronic system external to the PDA;

calculating a travel expense based on the travel distance transmitted to the electronic system; and

creating an expense report that includes the travel expense.

20. The method of claim 15, further comprising calculating a travel expense based on the travel distance, wherein associating the travel distance with a PDA expense report entry includes associating the travel expense with the PDA expense report entry for use in creating the expense report.

21. A method of using a Personal Digital Assistant (PDA) to provide travel expenses for an expense report, comprising:

selecting a procedure for determining a travel distance based on navigation data, wherein the procedures for determining a travel distance include:

calculating a route between a starting location and an ending location;

determining a distance along a track log between the starting location and the ending location; and

incrementing a counter to monitor a distance traveled from the starting location;

determining the travel distance based on navigation data using the selected procedure;

and

associating the travel distance with a PDA expense report entry.

22. The method of claim 21, wherein calculating a route between a starting location and an ending location includes:

wireless transmitting the starting location and the ending location from the PDA to an external electronic device such that the external device is capable of calculating the route and determining the distance; and

wirelessly transmitting the distance from the external device to the PDA.

23. The method of claim 21, wherein determining a distance along a track log between the starting location and the ending location further comprises forming the track log by monitoring PDA travel.

24. The method of claim 23, wherein forming the travel log by monitoring PDA travel includes:

identifying PDA positions using global positioning system (GPS) technology over a period of time; and

forming a set of track log points for the track log by using at least some of the identified PDA positions.

25. The method of claim 21, wherein determining a distance along a track log between the starting location and the ending location further comprises storing the track log in a memory located in the PDA.

26. The method of claim 21, wherein determining a distance along a track log between the starting location and the ending location further comprises storing the track log in an electronic device memory that is external to the PDA.

27. The method of claim 26, wherein determining a distance along a track log between the starting location and the ending location further comprises wirelessly transmitting the first endpoint, the second endpoint, and the track log to the electronic device such that the external device is capable of determining the distance along the track log between the first endpoint and the second endpoint.

28. The method of claim 21, further comprising resetting the counter to zero at the starting location.

29. The method of claim 21, further comprising monitoring a position of the PDA using global positioning system (GPS) technology to monitor the distance traveled from the starting location.

30. The method of claim 21, further comprising receiving a signal from a vehicle odometer that indicates the distance traveled to monitor the distance traveled from the starting location.

31. A Personal Digital Assistant (PDA) device with an integrated electronic map and expense report, comprising:

a processor; and

a memory adapted to communicate to the processor, the memory including navigation data, expense report data, and computer-executable instructions, wherein the computer-executable instructions are operable to;

monitor travel of the PDA;

record track log data points that represent actual positions of the PDA from the monitored travel of the PDA;

identify a travel distance from the recorded track log data points; and

associate that travel distance with the expense report data.

32. The PDA device of claim 31, wherein the memory includes a removable map data cartridge on which electronic map data is stored.

33. The PDA device of claim 31, wherein the device includes a transceiver adapted for transmitting and receiving wireless signals.

34. The PDA device of claim 31, further comprising a Global Positioning System (GPS) receiver adapted to receive GPS signals, wherein the GPS receiver is adapted to communicate with the processor.

35. The PDA device of claim 31, wherein the computer-executable instructions operable to identify a travel distance includes computer-executable instructions operable to:

identify a starting location;

identify an ending location;

calculate a route between the starting location and the ending location; and

determine a distance along the route between the starting location and the ending location.

B1
correct

36. The PDA device of claim 31, wherein the computer-executable instructions operable to identify a travel distance includes computer-executable instructions adapted to:

- identify a first endpoint on a track log segment;
- identify a second endpoint on the track log segment; and
- determine a distance along the track log segment between the first endpoint and the second endpoint.

38. A method of using a Personal Digital Assistant (PDA) to provide travel expenses for an expense report, comprising:

- determining a travel distance based on navigation data; and
- associating the travel distance with a PDA expense report entry.

39. The method of claim 38, wherein determining a travel distance based on navigation data includes determining a travel distance associated with a completed trip.

B2

40. The method of claim 39, wherein determining a travel distance associated with a completed trip includes defining segments within the completed trip as business travel.

41. The method of claim 40, wherein defining segments within the completed trip includes identifying a first and a second endpoint from within a larger track log in order to associate a particular defined segment with a PDA expense report entry.

42. The method of claim 38, wherein determining a travel distance includes identifying a starting location for a PDA from which a travel of the PDA is monitored in taxi meter mode in order to associate only particular routes of travel with a PDA expense report entry.

43. The method of claim 38, wherein the method further includes;

- transmitting the PDA expense report entry to an electronic system external to the PDA;
- using the transmitted PDA expense report entry to calculate a travel expense; and
- using the calculated travel expense to generate an expense report.

44. A method of using a Personal Digital Assistant (PDA) to provide travel expenses for an expense report, comprising:

monitoring a travel distance of the PDA;

associating the travel distance with an expense report entry on the PDA; and

entering a vendor, a vendor city, and one or more attendees in association with the expense report entry.

45. A Personal Digital Assistant (PDA), comprising:

a routing capability;

a position monitoring capability associated with the routing capability; and

wherein the PDA includes an odometer interface page available on a display and which is operable for recording an expense report entry.

46. The PDA of claim 45, wherein the PDA includes one or more interface pages, available on the display, which are actionable using a stylus to create the expense report entry.

47. The PDA of claim 46, wherein at least one interface page is actionable to define the expense report entry in reference to recorded track log data and a first and a second specified time of day.

B2
Concluded